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MINES DEPARTMENT.

MINES AND QUARRIES :
GENERAL REPORT, WITH STATISTICS,
For 1920.

BY

H.M. CHIEF INSPECTOR OF MINES.

PART I.—DIVISIONAL STATISTICS.

Presented to Parliament pursuant to Statute.

Ordered, by the House of Commons, to be printed 24th May, 1921.

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1921.

GENERAL REPORT, WITH STATISTICS
OF THE
MINE AND QUARRIES

DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

ANNUAL REPORT
FOR THE YEAR 1902

WASHINGTON
GOVERNMENT PRINTING OFFICE
1903

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NOTE.

Under the provisions of Sub-Section 2 (1) of the Mining Industry Act, 1920, all the powers of a Secretary of State under enactments relating to Mines and Quarries were transferred to the Board of Trade by Order in Council, dated the 6th December, 1920, and are now exercised under the provisions of Section 1 of the same Act through the Secretary for Mines.

These powers include, by virtue of Sub-Section 2 (3) of the Act, the collection, preparation, and publication of information and statistics relating to the mining industry.

The Annual General Report on Mines and Quarries now consists of three parts, issued separately, viz. :—

PART I. DIVISIONAL STATISTICS :—Statistics of the persons employed, output, and accidents at mines and quarries in the United Kingdom during the year, arranged according to the Inspection Divisions.

PART II. LABOUR :—General Report with Statistics relating to Persons Employed and Accidents at mines and quarries in the United Kingdom, and to the enforcement of the Mines and Quarries Acts.

PART III. OUTPUT :—General Report with Statistics relating to the Output and Value of the Minerals raised in the United Kingdom, the amount and value of the metals produced, and the exports and imports of minerals.

As regards the Colonial and Foreign Statistics, which were previously published as Part IV. of this Report, it has been arranged that the preparation and publication of these Colonial and Foreign Statistics shall be undertaken in future by the Imperial Mineral Resources Bureau.

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MINES AND QUARRIES: GENERAL REPORT, WITH STATISTICS, For 1920.

PART 1.—DIVISIONAL STATISTICS.

MINES DEPARTMENT,
46, VICTORIA STREET, S.W.,
18th April, 1921.

SIR,

I HAVE the honour to submit Part I. of the Annual General Report on Mines and Quarries for the year ending 31st December, 1920. This part contains the Divisional Statistics for the year. The form in which these statistics appear is governed by administrative arrangements. The main classification of the mineral workings accordingly follows the Statutes regulating the working of mines and quarries :—

- (1) Mines under the Coal Mines Act, 1911, *i.e.*, all mines of coal, stratified ironstone, shale, and fireclay—including within the term “mine,” works above ground where the minerals are prepared for use or sale by screening, washing, &c.
- (2) Mines under the Metalliferous Mines Regulation Acts, *i.e.*, all mines other than those included under the first head.
- (3) Quarries under the Quarries Act, 1894, *i.e.*, all quarries more than 20 ft. deep.
- (4) Other mineral workings not regulated by any of the Acts mentioned above. Under this head are included the shallow iron-ore workings, brine wells, and certain other works, the owners of which make voluntary returns. It must be borne in mind, however, that in the absence of statutory powers it is impossible to collect returns from most of the shallow quarries.

More detailed reference will be made to these statistics in Parts II. and III. of the Report, which will follow in due course, but it is worthy of immediate note that the death-rate from accidents in and about mines under the Coal Mines Act was only 0·88 per thousand persons employed. This is a record.

I have the honour to be,

Sir,

Your obedient Servant,

THOMAS H. MOTTRAM,

H.M. Chief Inspector of Mines.

The Right Hon. W. C. Bridgeman, M.P.,
Secretary for Mines.

PERSONS EMPLOYED.

COAL MINES ACT.

TABLE No. 1.—**Persons Employed** in and about the MINES (including those on Sidings at the Pits and on Private Branch Railways and Tramways and in washing Coal), under the COAL MINES ACT in GREAT BRITAIN and IRELAND during the Year 1920.

| Persons Employed. | | Inspection Division. | | | | | | | Total. |
|-------------------------------|---------------------|----------------------|---------|---------|--------------------------------------|----------|---------|---------|-----------|
| | | 1 | 2 | 3 | 4 | | 5 | 6 | |
| | | | | | Lancashire, North Wales and Ireland. | | | | |
| | | | | | Scotland | Northern | | | |
| Under Ground. | Males. | | | | | | | | |
| | Ages under 16 | 5,228 | 11,812 | 13,559 | 4,445 | 20 | 13,894 | 4,935 | 53,893 |
| | „ above 16 | 116,422 | 188,504 | 211,590 | 103,556 | 728 | 212,320 | 103,346 | 936,466 |
| | Total | 121,650 | 200,316 | 225,149 | 108,001 | 748 | 226,214 | 108,281 | 990,359 |
| Above Ground. | Males. | | | | | | | | |
| | Ages under 14 | 51 | 480 | 2,600 | 638 | — | 307 | 601 | 4,677 |
| | „ 14 to 16 | 2,463 | 4,900 | 4,743 | 1,998 | 9 | 1,908 | 2,415 | 18,436 |
| | „ above 16 | 26,213 | 51,815 | 54,100 | 22,725 | 198 | 42,858 | 28,525 | 226,434 |
| | Females. | | | | | | | | |
| | Ages under 14 | 3 | — | — | 11 | — | — | 1 | 15 |
| | „ 14 to 16 | 287 | 7 | 6 | 131 | — | 2 | 10 | 443 |
| | „ above 16 | 3,826 | 725 | 260 | 2,453 | 1 | 227 | 368 | 7,860 |
| Total | 32,843 | 57,927 | 61,709 | 27,956 | 208 | 45,302 | 31,920 | 257,865 | |
| Total under and above ground. | | 154,493 | 258,243 | 286,858 | 135,957 | 956 | 271,516 | 140,201 | 1,248,224 |
| Total in preceding year .. | | 147,039 | 246,201 | 275,058 | 129,357 | 886 | 257,613 | 135,159 | 1,191,313 |
| Number of Mines at work.. | | 518 | 469 | 475 | 296 | 13 | 614 | 466 | 2,851 |
| Number in preceding year | | 512 | 439 | 483 | 299 | 16 | 576 | 518 | 2,843 |

PERSONS EMPLOYED.

METALLIFEROUS MINES REGULATION ACTS.

TABLE NO. 2.—**Persons Employed** in and about the MINES under the METALLIFEROUS MINES REGULATION ACTS in GREAT BRITAIN and IRELAND, with the ISLE OF MAN, during the Year 1920.

| Persons Employed. | | Inspection Division. | | | | | | Total. |
|-------------------------------|---------------------|----------------------|----------|------------------------|--------------------------------------|--------------|----------------------|--------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | |
| | | Scotland | Northern | York and North-Midland | Lancashire, North Wales and Ireland. | South Wales. | Midland and Southern | |
| | | | | | Lancashire and North Wales. | Ireland. | | |
| Under Ground. | <i>Males.</i> | | | | | | | |
| | Ages 13 to 14 | — | — | 2 | — | — | 1 | 3 |
| | „ 14 to 16 | 4 | 16 | 10 | — | 1 | 59 | 91 |
| | „ above 16 | 502 | 5,817 | 471 | 1,770 | 317 | 3,053 | 12,197 |
| | Total | 506 | 5,833 | 483 | 1,770 | 318 | 3,113 | 12,291 |
| Above Ground. | <i>Males.</i> | | | | | | | |
| | Ages 12 to 14 | 1 | 7 | 6 | — | 1 | — | 15 |
| | „ 14 to 16 | 29 | 178 | 23 | 87 | 13 | 154 | 490 |
| | „ above 16 | 372 | 2,111 | 567 | 1,980 | 266 | 2,838 | 8,313 |
| | <i>Females.</i> | | | | | | | |
| | Ages 12 to 14 | — | — | — | — | — | — | — |
| | „ 14 to 16 | 6 | 1 | — | — | — | 8 | 15 |
| | „ above 16 | 62 | 36 | 4 | 6 | 6 | 83 | 199 |
| | Total | 470 | 2,333 | 600 | 2,073 | 286 | 3,083 | 9,032 |
| Total under and above ground. | | 976 | 8,166 | 1,083 | 3,843 | 604 | 6,196 | 21,323 |
| Total in preceding Year .. | | 920 | 8,446 | 988 | 3,196 | 597 | 7,064 | 21,661 |
| Number of Mines at work.. | | 22 | 129 | 52 | 92 | 28 | 158 | 498 |
| Number in preceding Year | | 24 | 136 | 46 | 89 | 31 | 156 | 495 |

PERSONS EMPLOYED.

QUARRIES ACT.

TABLE NO. 3.—**Persons Employed** in and about the **QUARRIES** (more than 20 ft. deep) of **GREAT BRITAIN and IRELAND**, with the **ISLE of MAN**, during the Year 1920.

| Persons Employed. | | Inspection Division. | | | | | | Total. | |
|-------------------------------|---------------------|----------------------|----------|------------------------|--------------------------------------|-------|--------------|--------|----------------------|
| | | 1 | 2 | 3 | 4 | | 5 | | 6 |
| | | Scotland | Northern | York and North Midland | Lancashire, North Wales and Ireland. | | South Wales. | | Midland and Southern |
| Lancashire and North Wales. | Ireland. | | | | | | | | |
| Inside the Quarries. | Males. | | | | | | | | |
| | Ages 12 to 14 | — | — | 6 | — | 1 | 2 | 18 | 27 |
| | „ 14 to 16 | 79 | 77 | 70 | 81 | 14 | 39 | 341 | 701 |
| | „ above 16 | 3,551 | 4,900 | 5,856 | 6,407 | 1,689 | 2,228 | 18,096 | 42,727 |
| | Females. | | | | | | | | |
| | Ages 12 to 14 | — | — | — | — | — | — | — | — |
| | „ 14 to 16 | 2 | — | — | — | — | — | — | 2 |
| | „ above 16 | 37 | 4 | 29 | 1 | — | 1 | 15 | 87 |
| | Total | 3,669 | 4,981 | 5,961 | 6,489 | 1,704 | 2,270 | 18,470 | 43,544 |
| Outside the Quarries. | Males. | | | | | | | | |
| | Ages 12 to 14 | — | — | 49 | 2 | 1 | 2 | 29 | 83 |
| | „ 14 to 16 | 64 | 68 | 145 | 259 | 11 | 34 | 421 | 1,002 |
| | „ above 16 | 1,716 | 1,366 | 4,078 | 5,256 | 590 | 837 | 9,022 | 22,865 |
| | Females. | | | | | | | | |
| | Ages 12 to 14 | — | — | — | — | — | — | — | — |
| | „ 14 to 16 | — | 1 | 1 | — | — | — | 3 | 5 |
| | „ above 16 | 17 | 22 | 47 | 21 | 2 | 8 | 134 | 251 |
| | Total | 1,797 | 1,457 | 4,320 | 5,538 | 604 | 881 | 9,609 | 24,206 |
| Total Inside and Outside .. | | 5,466 | 6,438 | 10,281 | 12,027 | 2,308 | 3,151 | 28,079 | 67,750 |
| Total in preceding Year .. | | 4,279 | 5,971 | 8,392 | 9,595 | 2,588 | 2,567 | 23,684 | 57,076 |
| Number of Quarries at work .. | | 899 | 557 | 718 | 493 | 423 | 285 | 2,104 | 5,479 |
| Number in preceding Year .. | | 818 | 489 | 655 | 457 | 525 | 262 | 1,929 | 5,135 |

OUTPUT OF MINERALS.

TABLE NO. 4.—**Summary of OUTPUT OF MINERALS from MINES, QUARRIES and BRINE WELLS.**

| Description of Mineral. | Mines. | | Quarries.* | Total Output 1920. | Total 1919. |
|---|--------------------|--------------------------------------|-----------------------------|--------------------------------------|------------------------------|
| | Coal Mines Act. | Metal- liferous Mines Acts. | | | |
| | Tons. | Tons. | Tons. | Tons. | Tons. |
| Alum Shale .. | 5,539 | — | — | 5,539 | 4,848 |
| Arsenic .. | — | 1,926 | 71 | 1,997 | 2,527 |
| Arsenical Pyrites .. | — | 1,178 | — | 1,178 | 75 |
| Barium (Com- pounds) .. | 8,765 | 51,512 | 3,873 | 64,150 | 60,087 |
| Bauxite .. | — | 11,020 | — | 11,020 | 9,221 |
| Bog Ore .. | — | — | 2,179 | 2,179 | 3,045 |
| Chalk .. | — | 983 | 3,746,182 | 3,747,165 | 2,629,406 |
| Chert, Flint, &c. .. | — | 3,240 | 81,063 | 84,303 | 50,082 |
| Chromite of Iron .. | — | — | 1,100 | 1,100 | 150 |
| Clays† and Shale .. | 2,210,067 | 99,989 | 8,720,362 | 11,030,418 | 7,765,965 |
| Coal .. | 229,503,435 | — | 28,646 | 229,532,081 | 229,779,517 |
| Copper Ore and Copper Precipi- tate. .. | — | 215 | 60 | 275 | 372 |
| Fluor Spar .. | — | 41,183 | 13,500 | 54,683 | 36,860 |
| Gold Ore .. | — | 1 | — | 1 | — |
| Gravel and Sand .. | — | 18,449 | 2,738,603 | 2,757,052 | 2,048,427 |
| Gypsum .. | — | 228,568 | 58,410 | 286,978 | 220,003 |
| Igneous Rocks .. | 471 | 17,307 | 5,602,913 | 5,620,691 | 4,387,703 |
| Iron Ore .. | 4,985,410 | 1,342,495 | 6,379,570 | 12,707,475 | 12,254,195 |
| Iron Pyrites .. | 6,264 | 395 | — | 6,659 | 7,336 |
| Lead Ore .. | — | 14,374 | 1,025 | 15,399 | 13,868 |
| Lignite .. | — | 150 | — | 150 | — |
| Limestone (other than Chalk). .. | 1,926 | 265,690 | 10,960,201 | 11,227,817 | 9,537,495 |
| Manganese Ore .. | — | 12,875 | — | 12,875 | 12,078 |
| Natural Gas .. | — | — | c.ft. 95,000 | c.ft. 95,000 | c.ft. 90,000 |
| Ochre, Umber, &c. .. | — | 6,164 | 8,793 | 14,957 | 10,547 |
| Oil Shale .. | 2,829,515 | — | 13,067 | 2,842,582 | 2,763,875 |
| Rock Salt .. | — | 108,083 | — | 108,083 | 90,938 |
| Salt from Brine .. | — | — | 2,050,287 | 2,050,287 | 1,817,142 |
| Sandstone .. | 85,287 | 41,745 | 2,056,784 | 2,183,816 | 1,699,853 |
| Slate .. | — | 58,315 | 156,954 | 215,269 | 164,098 |
| Soapstone .. | — | 361 | — | 361 | 688 |
| Sulphate of Strontia .. | — | — | 4,183 | 4,183 | 1,872 |
| Tin Ore (dressed) .. | — | 4,149 | 709 | 4,858 | 5,156 |
| Tungsten Ores .. | — | 93 | 1 | 94 | 166 |
| Uranium Ore .. | — | 60 | — | 60 | — |
| Zinc Ore .. | — | 3,878 | 1,186 | 5,064 | 6,933 |
| Total .. | 239,636,679 | 2,334,398 | 42,629,722 c.ft. 95,000‡ | 284,600,799 c.ft. 95,000‡ | 275,384,528 c.ft. 90,000‡ |

* Exclusive of the produce of most of the Quarries less than 20 ft. deep, but including the produce of all open workings for Iron Ore, Bog Ore, Ochre, Sulphate of Strontia, and Tin Ore, &c.

† Including china clay, china stone, and mica clay.

‡ Natural gas.

OUTPUT OF MINERALS.

COAL MINES ACT.

TABLE No. 5.—Output of Minerals from MINES under the COAL MINES ACT, in GREAT BRITAIN and IRELAND, during the Year 1920.

| Description of Mineral. | Inspection Division. | | | | | | Total. | Total in preceding Year. |
|--|----------------------|-------------------|-------------------------|-----------------------------|--------------------------------------|-------------------|-----------------------|---------------------------|
| | 1 | 2 | 3 | 4 | | 5 | 6 | |
| | Scotland. | Northern. | York and North Midland. | Lancashire and North Wales. | Lancashire, North Wales and Ireland. | South Wales. | Midland and Southern. | |
| Barium (Compounds) .. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| Clay and Shale, other than Fireclay and Oil Shale. | 145,586 | 8,765 | 12,231 ^a | 16,230 | — | — | 24,534 | 7,571 |
| Coal* .. | 31,523,941 | 43,852,538 | 61,402,279 | 21,586,562 | 107,961 | 46,248,967 | 24,681,187 | 183,128 |
| Fireclay .. | 547,951 | 352,674 | 339,006 | 147,173 | — | 109,049 | 470,187 | 1,849,690 |
| Igneous Rocks .. | — | 765 | — | — | — | — | — | 68 |
| Iron Pyrites .. | 279,383 | 3,714,446 | 564 | 537 | — | 63 | 4,335 | 6,866 |
| Limestone .. | 1,926 | — | 37,021 | — | — | 10,368 | 944,192 | 4,949,944 |
| Ochre, Umber, &c. .. | — | — | — | — | — | — | — | 2,249 |
| Oil Shale .. | 2,827,792 | — | — | — | — | — | 1,723 | 9 |
| Sandstone (including "Ganister") .. | 35,161 | 884 | 46,971 | 260 | — | 1,654 | 357 | 2,759,165 |
| Total .. | 35,361,740 | 47,981,528 | 61,838,072 | 21,850,762 | 107,961 | 46,370,101 | 26,126,515 | 2,829,515 |
| Total in preceding Year | 36,200,867 | 47,913,705 | 58,348,352 | 22,803,212 | 92,414 | 47,659,247 | 26,583,142 | 85,287[†] |
| | | | | | | | | 239,600,939 |
| | | | | | | | | 239,600,939 |

^a Including 5,539 tons of Alum Shale.

* The quantity of Coal obtained from open quarries (pp. 12 and 13) was 28,646 tons, making the total output of Coal 229,532,081 tons, against 229,779,517 tons in 1919.

† The quantity of Ganister obtained was 84,082 tons.

‡ The quantity of Ganister obtained was 97,537 tons.

OUTPUT OF MINERALS.

METALLIFEROUS MINES REGULATION ACTS.

TABLE No. 6.—Output of Minerals from Mines under the METALLIFEROUS MINES REGULATION ACTS, in GREAT BRITAIN and IRELAND, with the ISLE OF MAN, during the Year 1920.

| Description of Mineral. | Inspection Division. | | | | | | | Total. | Total in preceding Year. | |
|-----------------------------------|----------------------|------------------|----------------|-------------------------|-----------------------------------|---------------|-----------------------|----------------------|--------------------------|----------|
| | 1 | 2 | 3 | 4 | | 5 | 6 | | | |
| | | | | York and North Midland. | Lancashire, N. Wales and Ireland. | | | | | |
| | | | | | Lancashire and North Wales. | | | | | Ireland. |
| Scotland. | Tons. | Northern. | Tons. | Tons. | Tons. | South Wales. | Midland and Southern. | Tons. | Tons. | |
| Arsenic | — | — | — | — | — | — | — | 1,926 | 2,450 | |
| Arsenical Pyrites | — | — | — | — | — | — | — | 1,178 | 75 | |
| Barium (Compound(s)) | 5,247 | 15,903 | 9,766 | 2,343 | 4,119 | — | — | 14,134 | 47,951 | |
| Bauxite | — | — | — | — | 11,020 | — | — | — | 9,221 | |
| Chalk | — | — | — | — | — | — | — | 983 | 600 | |
| Chert, Flint, &c. | — | 1,167 | 2,073 | — | — | — | — | 3,240 | 2,643 | |
| Clay and Shale | 3,425 ^a | — | — | — | — | — | — | 96,563 | 80,291 | |
| Copper Ore and Copper Precipitate | — | — | — | 77 | — | — | — | 314 | 314 | |
| Fluor Spar | — | 24,694 | 16,489 | — | — | — | — | 41,183 | 32,725 | |
| Gold Ore | — | — | — | 1 | — | — | — | — | — | |
| Gravel and Sand | — | 8,674 | 9,591 | 184 | — | — | — | 79,539 | 11,468 | |
| Gypsum | — | 20,171 | 128,858 | — | — | — | — | 228,568 | 185,057 | |
| Igneous Rocks | — | 16,322 | — | — | 185 | — | — | 800 | 9,713 | |
| Iron Ore | — | 1,262,414 | — | 184 | 28,295 | 43,489 | 8,113 | 1,342,495 | 1,313,218 | |
| Iron Pyrites | — | — | — | — | 395 | — | — | 395 | 470 | |
| Lead Ore | 4,916 | 5,738 | 1,889 | 1,575 | — | 228 | 28 | 14,374 | 13,844 | |
| Lignite | — | — | — | — | 150 | — | — | 150 | — | |
| Limestone | 199,598 | 10,200 | 139 | 200 | — | — | 55,553 | 265,690 ^b | 198,644 ^c | |
| Manganese Ore | — | — | — | 12,875 | — | — | — | 12,875 | 12,078 | |
| Ochre, Umber, &c. | — | — | — | 558 | 1,182 | — | 4,424 | 6,164 | 5,517 | |
| Rock Salt | — | — | — | 84,994 | 23,089 | — | — | 108,083 | 90,938 | |
| Sandstone | — | 11,079 | 7,790 | 14,098 | — | — | 8,778 | 41,745 ^d | 30,993 ^e | |
| Slate | — | 1,864 | — | 56,451 | — | — | — | 58,315 | 44,142 | |
| Soapstone | — | — | — | — | 361 | — | — | 361 | 688 | |
| Tin Ore (dressed) | — | — | — | — | — | — | 4,149 | 4,149 | 4,482 | |
| Tungsten Ores | — | — | — | — | — | — | 93 | 93 | 166 | |
| Uranium Ore | — | — | — | — | — | — | 60 | 60 | — | |
| Zinc Ore | 388 | 2,305 | 190 | 949 | — | 44 | 2 | 3,872 | 6,564 | |
| Total | 213,575 | 1,380,531 | 176,785 | 174,489 | 68,796 | 43,761 | 276,461 | 2,334,398 | 2,104,252 | |
| Total in preceding Year | 166,834 | 1,327,377 | 140,365 | 147,928 | 52,050 | 50,482 | 219,216 | 2,104,252 | — | |

^a Including 741 tons of Honestone.

^b Including 374 tons of Calc Spar.

^c Including 191 tons of Calc Spar.

^d Including 9,667 tons of Ganister.

^e Including 10,366 tons of Ganister.

^a Including 741 tons of Honestone.^b Including 374 tons of Calc Spar.^c Including 191 tons of Calc Spar.^d Including 9,667 tons of Ganister.^e Including 10,366 tons of Ganister.

OUTPUT OF MINERALS.

QUARRIES ACT.

TABLE No. 7.—Output of Minerals from QUARRIES (more than 20 ft. deep) in GREAT BRITAIN and IRELAND, with the ISLE OF MAN, during the Year 1920.

| Description of Mineral. | Inspection Division. | | | | | | Total. | Total in preceding Year. |
|---|----------------------|------------------|-------------------------|-----------------------------|--------------------------------------|------------------|-----------------------|--------------------------|
| | 1 | 2 | 3 | 4 | | 5 | | |
| | Scotland. | Northern. | York and North Midland. | Lancashire and North Wales. | Lancashire, North Wales and Ireland. | South Wales. | Midland and Southern. | |
| Barium (Compounds) | Tons | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| Chalk | — | — | 391,897 | — | 145,169 | — | 2,535 | 2,449 |
| Chert, Flint, &c. | — | 257 | 1,817 | — | 235 | — | 3,209,116 | 2,628,806 |
| Clays, other than China Clay, and Oil Shale | 267,531 | 354,770 | 1,481,246 | 1,008,506 | 95,200 | 324,702 | 77,652 | 47,439 |
| China Clay | — | — | — | — | — | — | 4,324,038 | 5,139,612 |
| China Stone | — | — | — | — | — | — | 777,511 | 463,711 |
| Chromite of Iron | 1,100 | — | — | — | — | — | 73,102 | 43,043 |
| Coal | — | 4,426 | 16,704 | 124 | — | — | 1,100 | 150 |
| Gravel and Sand | 427,860 | 164,122 | 447,109 | 144,283 | 69,294 | 8,133 | 1,477,802 | 26,538 |
| Gypsum | — | 20,456 | 36,581 | — | 703 | — | 500 | 2,036,959 |
| Igneous Rocks | 1,404,958 | 585,136 | 15,731 | 856,507 | 387,555 | 61,229 | 58,240 | 34,946 |
| Ironstone | — | 3,434 | 2,716,098 | — | — | — | 2,291,797 | 4,377,922 |
| Lead Ore | 1,000 | — | — | — | — | — | 2,925,927 | 5,287,174 |
| Limestone, other than Chalk | 89,694 | 3,209,692 | 2,906,980 | 963,270 | 145,243 | 1,149,123 | — | 3 |
| Mica Clay | — | — | — | — | — | — | 2,496,199 | 9,336,602 ^b |
| Ochre and Umber | — | — | 588 | — | — | — | 13,756 | 11,338 |
| Oil Shale | 13,067 | 124,555 | 418,005 | 447,669 | 68,971 | 416,293 | 8,653 | 5,021 |
| Sandstone, Quartzite, &c. | 162,205 | 5,138 | — | 133,527 | 966 | 2,919 | 4,710 | 4,710 |
| Slate | 3,444 | — | — | — | — | — | 419,086 | 1,569,739 ^d |
| Tin Ore (dressed) | — | — | — | — | — | — | 10,960 | 119,956 |
| Zinc Ore | 1,000 | — | — | — | — | — | 7 | 6 |
| Total | 2,371,859 | 4,471,986 | 8,432,756 | 3,554,988 | 913,336 | 1,962,399 | 18,114,558 | 39,821,882 |
| Total in preceding Year | 1,909,572 | 3,775,966 | 6,878,608 | 2,696,336 | 890,743 | 1,531,137 | 13,453,762 | 31,136,124 |

^a Including 274 tons of Calc Spar.^b Including 110 tons of Calc Spar.^c Including 216,280 tons of Ganister.^d Including 214,786 tons of Ganister.

OUTPUT OF MINERALS.

TABLE No. 8.—**Output of Minerals** from certain WORKINGS not included under the PROVISIONS of the MINES REGULATION ACTS, or the QUARRIES ACT, during the Year 1920.

| Description of Mineral. | Division in which Situated. | | | | | | Total. | Total in preceding Year. |
|--|-----------------------------|-----------|-------------------------|-----------------------------|--------------------------------------|--------------|-----------------------|--------------------------|
| | 1 | 2 | 3 | 4 | | 5 | | |
| | Scotland. | Northern. | York and North Midland. | Lancashire and North Wales. | Lancashire, North Wales and Ireland. | South Wales. | Midland and Southern. | |
| | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| Arsenic .. | — | — | — | — | — | — | 71 | 77 |
| Barium (Compounds) .. | — | — | 1,338 | — | — | — | — | 2,116 |
| Bog Ore.. | — | 638 | — | — | 296 | — | 1,245 | 3,045 |
| Coal .. | — | — | 887 | — | — | — | — | 9,851 |
| Copper Precipitate .. | — | — | — | — | — | — | 60 | 58 |
| Fluor Spar .. | — | — | 13,500 | — | — | — | — | 4,135 |
| Gypsum.. | — | — | 170 | — | — | — | — | — |
| Ironstone .. | — | — | 348,538 | — | — | — | 385,573 | 703,859 |
| Lead Ore .. | — | — | — | — | 25 | — | — | 21 |
| Natural Gas .. | — | — | — | — | — | — | c.ft. 95,000 | c.ft. 90,000 |
| Ochre and Umber .. | — | — | — | — | — | — | 140 | — |
| Salt from Brine .. | 78 | 138,797 | — | 1,798,620* | † | — | 112,792† | 1,817,142 |
| Sulphate of Strontia .. | — | — | — | — | — | — | 4,183 | 1,872 |
| Tin Ore (dressed), from streams, foreshores, &c. | — | — | — | — | — | — | 702 | 668 |
| Tungsten Ores .. | — | — | — | — | — | — | 1 | 1 |
| Zinc Ore .. | — | — | — | — | 40 | — | 146 | 369 |
| | | | | | | | Tons. 71 | Tons. 77 |
| | | | | | | | 1,338 | 2,116 |
| | | | | | | | 2,179 | 3,045 |
| | | | | | | | 887 | 9,851 |
| | | | | | | | 60 | 58 |
| | | | | | | | 13,500 | 4,135 |
| | | | | | | | 170 | — |
| | | | | | | | 734,111 | 703,859 |
| | | | | | | | 25 | 21 |
| | | | | | | | c.ft. 95,000 | c.ft. 90,000 |
| | | | | | | | 140 | — |
| | | | | | | | 2,050,287 | 1,817,142 |
| | | | | | | | 4,183 | 1,872 |
| | | | | | | | 702 | 668 |
| | | | | | | | 1 | 1 |
| | | | | | | | 186 | 369 |

The object of this table is to afford information concerning the output of certain metallic ores and a few other mineral products from workings not included either under the Mines Acts or the Quarries Act, in order to make the statistics as complete as possible. The figures given are based upon voluntary returns furnished by the courtesy of the owners. The table does not include any account of the large quantities of brick-earth, clay, gravel, sand, stone, &c., raised from workings less than 20 ft. deep. It is impossible to obtain complete statistics of these latter minerals in the absence of statutory powers.

* Including Output of Staffordshire from No. 6 Division and of Ireland.

† Included in the figures for Lancashire, North Wales, &c.

‡ Output of Worcestershire alone, as that of Staffordshire is included in the figures for No. 4 Division.

DEATHS FROM ACCIDENTS.

COAL MINES ACT.

TABLE NO. 9.—Deaths caused by ACCIDENTS in and about the MINES of GREAT BRITAIN and IRELAND (including those on Private and Branch Railways and Tramways, and in Washing Coal), during the Year 1920.

| No. of separate fatal accidents. | Place or Cause of Accident. | Inspection Division. | | | | | | Total. |
|----------------------------------|--------------------------------------|----------------------|------------|--------------------------|--|--------------|-------------------------|--------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | |
| | | Scot-land. | North-ern. | York and North Mid-land. | Lancashire, North Wales, and Ireland. Lancashire and N. Wales. Ire-land. | South Wales. | Mid-land and South-ern. | |
| 16 | Explosions of Fire-damp or Coal Dust | 13 | 3 | — | — | 9 | 1 | 26 |
| 326 | Falls of Ground. | 45 | 65 | 76 | 33 | 80 | 38 | 337 |
| 119 | | 13 | 13 | 22 | 26 | 36 | 15 | 125 |
| 77 | | 15 | 14 | 17 | 8 | 21 | 5 | 80 |
| 2 | | 1 | 1 | — | — | — | — | 2 |
| 524 | Total | 74 | 93 | 115 | 67 | 137 | 58 | 544 |
| — | Shaft Accidents. | — | — | — | — | — | — | — |
| — | | — | — | — | — | — | — | — |
| 6 | | — | 2 | — | 4 | 1 | 1 | 8 |
| 4 | | 1 | — | 1 | — | 1 | 1 | 4 |
| 12 | | 1 | 5 | — | 4 | 1 | 2 | 13 |
| 1 | | — | — | — | — | 1 | — | 1 |
| 1 | | — | — | 1 | — | — | — | 1 |
| 13 | | 6 | — | 1 | 2 | 3 | 1 | 13 |
| 37 | Total | 8 | 7 | 3 | 10 | 7 | 5 | 40 |
| 22 | Miscellaneous Underground. | 8 | 6 | 2 | 1 | 2 | 3 | 22 |
| 2 | | — | — | — | — | 2 | — | 2 |
| 1 | | 4 | — | — | — | — | — | 4 |
| — | | — | — | — | — | — | — | — |
| 7 | | — | 1 | — | 1 | 5 | — | 7 |
| 86 | | 8 | 13 | 17 | 6 | 33 | 9 | 86 |
| 56 | | 2 | 13 | 17 | — | 18 | 6 | 56 |
| 16 | | 1 | 2 | 3 | 3 | 3 | 4 | 16 |
| 49 | | 6 | 6 | 15 | 10 | 10 | 5 | 52 |
| 207 | | 17 | 34 | 52 | 19 | 64 | 24 | 210 |
| 3 | | 7 | 4 | 1 | 4 | 2 | 2 | 20 |
| 20 | | 1 | — | — | 1 | 1 | — | 3 |
| 11 | | 4 | — | 4 | 3 | — | — | 11 |
| 76 | | 6 | 11 | 17 | 10 | 27 | 5 | 76 |
| 349 | Total | 47 | 56 | 76 | 39 | 103 | 34 | 355 |
| 925 | Total Underground | 142 | 159 | 194 | 116 | 256 | 98 | 965 |
| 16 | On Surface. | 5 | 1 | 3 | 1 | 3 | 3 | 16 |
| 2 | | 2 | 1 | — | — | — | — | 3 |
| 12 | | 1 | 1 | 5 | 1 | 4 | — | 12 |
| 3 | | — | — | — | — | 3 | — | 3 |
| 17 | | 5 | 4 | 2 | 4 | 1 | 1 | 17 |
| 3 | | — | 2 | — | — | 1 | — | 3 |
| 19 | | 3 | 7 | 2 | — | 5 | 2 | 19 |
| 54 | | 9 | 14 | 9 | 5 | 14 | 3 | 54 |
| 6 | | 2 | 1 | — | — | 2 | 2 | 7 |
| 56 | | 10 | 9 | 13 | 5 | 12 | 9 | 58 |
| 134 | Total on Surface | 28 | 26 | 25 | 11 | 31 | 17 | 138 |
| 1,060 | Gross Total in 1920 | 170 | 185 | 219 | 127 | 287 | 115 | 1,103 |
| 1,089 | Total in preceding Year | 180 | 178 | 235 | 136 | 288 | 100 | 1,118 |

* Not including accidents coming under (a).

Decrease 15.

DEATHS FROM ACCIDENTS.

METALLIFEROUS MINES REGULATION ACTS.

TABLE NO. 10. **Deaths** caused by ACCIDENTS in and about the MINES of GREAT BRITAIN and IRELAND together with the ISLE OF MAN, during the Year 1920.

| No. of separate fatal accidents. | Place or Cause of Accident. | Inspection Division. | | | | | | Total. |
|----------------------------------|--------------------------------------|----------------------|------------|--------------------------|--|--------------|-------------------------|-----------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | |
| | | Scot-land. | North-ern. | York and North Mid-land. | Lancashire, North Wales and Ireland. Lancashire and N. Wales. Ireland. | South Wales. | Mid-land and South-ern. | |
| — | Explosions of Fire-damp | — | — | — | — | — | — | — |
| 15 | Falls of Ground | — | 6 | 1 | 3 | — | 5 | 15 |
| — | Shaft Accidents. | — | — | — | — | — | — | — |
| 1 | | — | — | — | — | — | 1 | 1 |
| — | | — | — | — | — | — | — | — |
| 1 | | — | 1 | — | — | — | — | 1 |
| — | | — | — | — | — | — | — | — |
| — | | — | — | — | — | — | — | — |
| — | | — | — | — | — | — | — | — |
| 2 | Total | — | 1 | — | — | — | 1 | 2 |
| 2 | Miscellaneous Underground. | — | — | — | 1 | — | 4 | 5 |
| — | | — | — | — | — | — | — | — |
| — | | — | — | — | — | — | — | — |
| — | | — | — | — | — | — | — | — |
| — | | — | — | — | — | — | — | — |
| — | | — | — | — | — | — | — | — |
| — | | — | — | — | — | — | — | — |
| — | | — | — | — | — | — | — | — |
| 3 | | — | — | — | 1 | — | 2 | 3 |
| 5 | Total | — | — | — | 2 | — | 6 | 8 |
| 22 | Total Underground | — | 7 | 1 | 5 | — | 12 | 25 |
| 2 | On Surface. | 1 | 1 | — | — | — | — | 2 |
| — | | — | — | — | — | — | — | — |
| — | | — | — | — | — | — | — | — |
| — | | — | — | — | — | — | — | — |
| — | | — | — | — | — | — | — | — |
| 2 | Total on Surface .. | 1 | 1 | — | — | — | — | 2 |
| 24 | Gross Total in 1920 | 1 | 8 | 1 | 5 | — | 12 | 27 |
| 31 | Total in preceding Year | 3 | 17 | 1 | 3 | 1 | 40† | 65 |

* Not including accidents coming under (a).

Decrease **33**.

† A disaster at the Levant Mine, Cornwall, on the 20th October, 1919, caused 31 deaths.

DEATHS FROM ACCIDENTS.

QUARRIES ACT.

TABLE NO. 11.—Deaths caused by ACCIDENTS in and about the QUARRIES (more than 20 feet deep) of GREAT BRITAIN and IRELAND, together with the ISLE OF MAN, during the Year 1920.

| No. of separate fatal accidents. | Place or Cause of Accident. | Inspection Division. | | | | | | Total. |
|----------------------------------|-----------------------------|----------------------|------------|--------------------------|---|--------------|-------------------------|--------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | |
| | | Scot-land. | North-ern. | York and North Mid-land. | Lancashire, North Wales and Ireland. Lancashire and N. Wales. Ire-land. | South Wales. | Mid-land and South-ern. | |
| 6 | Falls of Ground. | 2 | — | 2 | — | 1 | — | 3 |
| 12 | | — | 2 | 3 | 3 | — | 1 | 3 |
| 18 | | 2 | 2 | 5 | 3 | 1 | 6 | 20 |
| 12 | By Blasting. | 1 | 1 | — | — | — | — | 2 |
| 1 | | 1 | 1 | — | — | — | — | 2 |
| 3 | | 1 | — | — | — | — | — | 1 |
| 8 | By Blasting. | — | 1 | — | 1 | 1 | — | 3 |
| 1 | | — | — | — | — | — | — | — |
| 1 | | — | — | — | — | — | — | — |
| 1 | During Descent or Ascent. | — | — | — | — | — | — | — |
| 1 | | — | — | — | — | — | — | — |
| 1 | | — | — | — | — | — | — | — |
| 1 | Miscellaneous. | — | — | — | — | — | — | — |
| 1 | | — | — | — | — | — | 1 | 1 |
| 1 | | — | — | — | — | — | — | — |
| 3 | Miscellaneous. | — | — | — | 1 | — | 2 | 3 |
| 5 | | 1 | 1 | 1 | 1 | 1 | — | 5 |
| 8 | | 1 | — | 1 | 3 | 2 | 1 | 8 |
| 17 | Total Inside Quarries. | 2 | 1 | 2 | 5 | 3 | 4 | 17 |
| 43 | | 7 | 6 | 7 | 9 | 5 | 10 | 45 |
| 2 | Outside the Quarries. | — | — | 2 | — | — | — | 2 |
| 1 | | 1 | — | — | — | — | — | 1 |
| 1 | | — | — | 1 | — | — | — | 1 |
| 2 | Outside the Quarries. | — | — | — | — | — | 2 | 2 |
| 1 | | — | — | — | — | — | — | — |
| 3 | | — | — | 1 | — | 2 | — | 3 |
| 9 | Total outside Quarries | 1 | — | 4 | — | 2 | 2 | 9 |
| 52 | | 8 | 6 | 11 | 9 | 7 | 12 | 54 |
| 46 | | 3 | 10 | 3 | 6 | 4 | 20 | 46 |

Increase 8.

PERSONS INJURED.

COAL MINES ACT.

TABLE NO. 12.—**Number of Persons Injured** both by NON-FATAL ACCIDENTS and by ACCIDENTS which proved fatal to others, in and about the MINES of GREAT BRITAIN and IRELAND (including those on Private Branch Railways and Tramways, and in Washing and Coking Coal), during the Year 1920.

| Place or Cause of Accident. | | Persons Injured by Non-Fatal Accidents disabling for more than 7 Days. | | | | | | | Total Persons Injured by Accidents Reported to Inspectors.* | | |
|--|--|---|----------------|---------------------------------------|--|---------------|-----------------|---------------|---|---------------------------------------|--------------|
| | | Inspection Division. | | | | | | Total. | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | | | | |
| | | Scot- land. | North- ern. | York and North Mid- land. | Lancashire, North Wales and Ireland. Lancashire and N. Wales. | Ire- land. | South Wales. | | | Mid- land and South- ern. | |
| Explosions of Fire-damp or Coal Dust. | 59 | 6 | 7 | 3 | — | 29 | 1 | 105 | 128 | | |
| Falls of Ground. | At the Working Face .. | 3,060 | 5,875 | 8,577 | 3,575 | 23 | 7,975 | 2,998 | 32,083 | 1,124 | |
| | On Roads while repairing or enlarging. | 392 | 450 | 1,210 | 691 | 2 | 1,980 | 500 | 5,225 | 278 | |
| | On Roads while otherwise working or passing. | 307 | 582 | 965 | 637 | — | 1,086 | 425 | 4,002 | 206 | |
| | In Shafts | 8 | 4 | 7 | 1 | — | 27 | 1 | 48 | 2 | |
| | Total | 3,767 | 6,911 | 10,759 | 4,904 | 25 | 11,068 | 3,924 | 41,358 | 1,610 | |
| Shaft Accidents. | Overwinding | 3 | — | 29 | — | — | 16 | — | 48 | 63 | |
| | Ropes or Chains breaking. | — | 1 | 1 | 14 | — | — | — | 16 | — | |
| | Whilst descending or ascending by Machinery. | 13 | 3 | — | 10 | — | 9 | 2 | 37 | 9 | |
| | Falling down Shaft .. | 3 | 3 | — | — | — | 2 | 1 | 9 | 8 | |
| | Things falling down Shaft. | 11 | 14 | 18 | 17 | — | 21 | 7 | 88 | 13 | |
| | Miscellaneous | 23 | 85 | 56 | 43 | — | 46 | 35 | 288 | 22 | |
| | Total | 53 | 106 | 104 | 84 | — | 94 | 45 | 486 | 115 | |
| Miscellaneous Underground. | By Explosives | 73 | 76 | 15 | 10 | — | 42 | 18 | 234 | 273 | |
| | Suffocation by Natural Gases | 4 | 2 | 2 | — | — | — | 1 | 9 | 5 | |
| | By Underground Fires .. | — | — | — | — | — | — | — | — | — | |
| | Irruptions of Water .. | 1 | — | — | — | — | 4 | — | 5 | — | |
| | Haulage :— | | | | | | | | | | |
| | (a) Ropes or Chains breaking. | 27 | 7 | 29 | 18 | — | 10 | 10 | 101 | 17 | |
| | (b) Run over or crushed by Trams or Tubs— | | | | | | | | | | |
| | Mechanical Haulage .. | 271 | 597 | 814 | 372 | — | 278 | 392 | 2,724 | 260 | |
| | Horse Haulage | 145 | 2,650 | 1,556 | 91 | — | 1,564 | 687 | 6,693 | 285 | |
| | Hand Haulage | 800 | 659 | 1,204 | 989 | 11 | 346 | 531 | 4,540 | 194 | |
| | Runaway Trams or Tubs. | 98 | 106 | 88 | 153 | — | 59 | 45 | 549 | 96 | |
| | Total (b) | 1,314 | 4,012 | 3,662 | 1,605 | 11 | 2,247 | 1,655 | 14,506 | 835 | |
| | (c) Other Haulage Accidents. | 1,564 | 2,208 | 4,320 | 2,701 | 6 | 2,368 | 1,163 | 14,330 | 215 | |
| | Electricity | 5 | 3 | 2 | 3 | — | 2 | — | 15 | 17 | |
| | By Machinery | 84 | 135 | 126 | 89 | — | 107 | 87 | 628 | 80 | |
| | Sundries | 3,450 | 5,275 | 10,767 | 3,791 | 6 | 7,556 | 4,108 | 34,953 | 410 | |
| | | Total | 6,522 | 11,718 | 18,923 | 8,217 | 23 | 12,336 | 7,042 | 64,781 | 1,852 |
| | Total Underground .. | 10,401 | 18,741 | 29,793 | 13,208 | 48 | 23,527 | 11,012 | 106,730 | 3,705 | |
| On Surface. | By Machinery | 79 | 157 | 160 | 75 | 1 | 139 | 59 | 670 | 97 | |
| | Boiler Explosions | 2 | — | 1 | — | — | 1 | — | 4 | 8 | |
| | On Railways, Sidings, or Tramways :— | | | | | | | | | | |
| | While engaged in moving Waggon. | 126 | 175 | 173 | 35 | 1 | 257 | 129 | 896 | 80 | |
| | While engaged in coupling and uncoupling Waggon. | 14 | 41 | 33 | 2 | — | 28 | 18 | 136 | 9 | |
| | Run over while passing along or across Railways or Tramways. | 8 | 25 | 15 | 2 | 1 | 37 | 11 | 99 | 13 | |
| | Crushed between Waggon and Structures. | 106 | 99 | 142 | 58 | — | 97 | 31 | 533 | 10 | |
| | In other ways | 215 | 189 | 378 | 105 | — | 249 | 146 | 1,282 | 52 | |
| | Total | 469 | 529 | 741 | 202 | 2 | 668 | 335 | 2,946 | 164 | |
| | Electricity | 1 | 4 | 4 | 1 | — | 5 | — | 15 | 24 | |
| | Miscellaneous | 664 | 1,219 | 1,740 | 757 | 7 | 1,621 | 929 | 6,937 | 289 | |
| | | Total on Surface .. | 1,215 | 1,909 | 2,646 | 1,035 | 10 | 2,434 | 1,323 | 10,572 | 582 |
| | | Gross Total in 1920 .. | 11,616 | 20,650 | 32,439 | 14,243 | 58 | 25,961 | 12,335 | 117,302 | 4,287 |
| | Total in preceding Year .. | 11,075 | 22,812 | 30,191 | 15,109 | 38 | 25,297 | 12,900 | 117,422 | 4,262 | |

* Includes (a) accidents causing fracture of head or limb, or dislocation of limb, or any other serious personal injury; (b) accidents caused by explosion of gas or dust, or any explosive, or by electricity, or by overwinding, and causing any personal injury whatever.

PERSONS INJURED.

METALLIFEROUS MINES REGULATION ACTS.

TABLE NO. 13.—**Number of Persons Injured** both by NON-FATAL ACCIDENTS and by ACCIDENTS which proved FATAL to others in and about the MINES of GREAT BRITAIN and IRELAND, together with the ISLE OF MAN, during the Year 1920.

| Place or Cause of Accident. | | Persons Injured by Non-Fatal Accidents disabling for more than 7 days. | | | | | | | Total. | Total Persons Injured by Acci- dents Reported to Inspectors.* |
|-----------------------------------|--|---|----------------|---------------------------------------|--|---------------|-----------------|---------------------------------------|--------|--|
| | | Inspection Division. | | | | | | | | |
| | | 1 | 2 | 3 | 4 | | 5 | 6 | | |
| | | Scot- land. | North- ern. | York and North Mid- land. | Lancashire, North Wales and Ireland. | Ire- land. | South Wales. | Mid- land and South- ern. | | |
| Explosions of Fire-damp | — | 2 | — | — | — | — | — | 2 | 2 | |
| Falls of Ground | 8 | 105 | 2 | 6 | — | — | 83 | 204 | 33 | |
| Shaft Accidents. | Overwinding | — | — | — | — | — | — | — | — | |
| | Ropes or Chains breaking .. | — | — | — | — | — | — | — | — | |
| | Whilst descending or ascending by Machinery | — | 4 | — | — | — | — | 4 | 3 | |
| | Falling down Shaft | 1 | 1 | — | — | — | 2 | 4 | — | |
| | Things falling down Shaft .. | — | 1 | — | — | 1 | 14 | 16 | — | |
| | Miscellaneous | — | 6 | 1 | — | — | 9 | 16 | 2 | |
| Total | | 1 | 12 | 1 | — | 1 | — | 25 | 40 | 5 |
| Miscellaneous Underground. | By Explosives | 2 | 8 | — | 3 | 1 | 1 | 5 | 20 | 22 |
| | Suffocation by Natural Gases .. | — | — | — | — | — | — | — | — | — |
| | By Underground Fires | — | — | — | — | — | — | — | — | — |
| | Irruptions of Water | — | — | — | — | — | — | — | — | — |
| | Haulage :— | — | — | — | — | — | — | — | — | — |
| | Ropes or Chains breaking .. | — | — | — | — | — | — | — | — | — |
| | Run over or crushed by Trams or Tubs | — | 34 | 2 | 5 | 3 | — | 21 | 65 | 8 |
| | Other Haulage Accidents .. | 5 | 66 | 1 | 6 | — | — | 31 | 109 | 1 |
| | Electricity | — | 3 | — | — | — | — | — | — | — |
| | By Machinery | — | 3 | — | 2 | — | — | 8 | 13 | — |
| | Sundries | 14 | 156 | 9 | 57 | 2 | 6 | 179 | 423 | 24 |
| Total | | 21 | 267 | 12 | 73 | 6 | 7 | 244 | 630 | 55 |
| Total Underground | | 30 | 386 | 15 | 79 | 7 | 7 | 352 | 876 | 95 |
| On Surface. | By Machinery | 1 | 9 | — | 10 | — | — | 9 | 29 | 9 |
| | Boiler Explosions | — | 1 | — | — | — | — | — | 1 | — |
| | On Railways, Sidings, or Tram- ways | 5 | 11 | — | 5 | 2 | — | 13 | 36 | 3 |
| | Electricity | — | — | — | — | — | — | — | — | — |
| | Miscellaneous | 3 | 69 | 8 | 77 | 3 | 2 | 84 | 246 | 20 |
| Total on Surface .. | | 9 | 90 | 8 | 92 | 5 | 2 | 106 | 312 | 32 |
| Gross Total in 1920 | | 39 | 476 | 23 | 171 | 12 | 9 | 458 | 1,188 | 127 |
| Total in preceding Year .. | | 32 | 450 | 20 | 131 | 15 | 8 | 451 | 1,107 | 116 |

* Includes (a) accidents causing fracture of head or limb, or dislocation of limb, or any other serious personal injury; (b) accidents caused by explosion of gas, or any explosive, or by electricity, or by overwinding, and causing any personal injury whatever.

PERSONS INJURED.

QUARRIES ACT.

TABLE NO. 14.—**Number of Persons Injured** both by NON-FATAL ACCIDENTS and by ACCIDENTS which proved FATAL to others in and about the QUARRIES (more than 20 ft. deep) of GREAT BRITAIN and IRELAND, together with the ISLE OF MAN, during the Year 1920.

| Persons Injured by Non-Fatal Accidents disabling for more than 7 Days. | | | | | | | | | | | Total Persons Injured by Acci- dents Reported to Inspectors.* |
|---|--------------------------------------|---|-----------------------------|------------|--|---------------|------------|--------------|--------------|----------------|--|
| Place or Cause of Accident. | | Inspection Division. | | | | | | | Total. | | |
| | | 1 | 2 | 3 | 4 | | 5 | 6 | | | |
| | | | | | Lancashire, North Wales and Ireland. | Ire- land. | | | | | |
| | | | | | | | | | | Scot- land. | |
| Falls of Ground | | 3 | 32 | 69 | 45 | 7 | 22 | 103 | 281 | 127 | |
| By Explosives | | 2 | 16 | 16 | 10 | 2 | 3 | 10 | 59 | 73 | |
| Inside the Quarries (<i>i.e.</i> , inside the actual Pits, Holes, or Excavations.) | During Descent or Ascent. | Falling from Paths, Steps or Ladders | — | 7 | 2 | 2 | — | 2 | 18 | 31 | 1 |
| | | When descending or ascending by ma- chinery | — | — | — | — | — | — | 1 | 1 | — |
| | | Miscellaneous | — | 27 | — | — | — | 6 | 103 | 136 | 1 |
| | | Total | — | 34 | 2 | 2 | — | 8 | 122 | 168 | 2 |
| | | Miscellaneous. | Ropes or Chains breaking | — | — | — | — | — | — | 3 | 3 |
| | Machinery | | 1 | — | 4 | 1 | — | 4 | 10 | 20 | 12 |
| | Boiler Explosions .. | | — | — | — | — | — | — | — | — | — |
| | On inclined and Engine Planes | | — | 2 | — | 8 | — | — | 6 | 16 | 7 |
| | On Railways, Sidings, or Tramways | | 3 | 30 | 42 | 30 | 1 | 9 | 132 | 247 | 25 |
| | Falling from Ledges .. | | 1 | 13 | 11 | 4 | 2 | 5 | 6 | 42 | 21 |
| | Electricity | | — | — | — | — | — | — | — | — | — |
| | Sundries | | 51 | 235 | 255 | 412 | 56 | 90 | 524 | 1,623 | 300 |
| | Total | 56 | 280 | 312 | 455 | 59 | 108 | 681 | 1,951 | 367 | |
| | Total inside Quarries .. | | 61 | 362 | 399 | 512 | 68 | 141 | 916 | 2,459 | 569 |
| | Outside the Quarries. | Machinery | 2 | 7 | 11 | 10 | 2 | 3 | 32 | 67 | 15 |
| Boiler Explosions .. | | 1 | — | 1 | — | — | — | — | 2 | 1 | |
| On Inclined and Engine Planes | | — | 1 | — | 2 | — | 1 | 6 | 10 | 3 | |
| On Railways, Sidings, or Tramways | | 6 | 20 | 57 | 42 | 1 | 10 | 108 | 244 | 14 | |
| Electricity | | — | — | — | — | — | — | — | — | — | |
| Miscellaneous | | 33 | 21 | 156 | 220 | 17 | 33 | 309 | 789 | 98 | |
| Total outside Quarries .. | | 42 | 49 | 225 | 274 | 20 | 47 | 455 | 1,112 | 131 | |
| Gross Total in 1920 | | 103 | 411 | 624 | 786 | 88 | 188 | 1,371 | 3,571 | 700 | |
| Total in preceding Year | | 135 | 347 | 447 | 555 | 77 | 121 | 1,014 | 2,696 | 469 | |

* Includes (a) accidents causing fracture of head or limb, or dislocation of limb, or any other serious personal injury; (b) accidents caused by any explosive, or by electricity, or by overwinding, and causing any personal injury whatever.

ACCIDENT DEATH-RATES.**MINES AND QUARRIES.**TABLE NO. 15.—In and about Mines classed under the
COAL MINES ACT.

| Place or Cause of Accident. | Inspection Division. | | | | | | | | Average. | | | | | | | |
|--|--|----------------|---------------------------------------|--------------------------------|---------------|-----------------|---------------------------------------|-------------|------------|------------|------------|----------|-------------|------------|------------|------------|
| | 1 | 2 | 3 | 4 | | 5 | 6 | 1920. | 1919. | | | | | | | |
| | Scot- land. | North- ern. | York and North Mid- land. | Lancashire and N. Wales. | Ire- land. | South Wales. | Mid- land and South- ern. | | | | | | | | | |
| Per 1,000 persons employed. | Underground :— | | | | | | | | | | | | | | | |
| | By explosions of fire-damp or coal dust. | ·11 | ·01 | — | — | — | ·04 | ·01 | ·03 | ·03 | | | | | | |
| | „ falls of ground | ·61 | ·46 | ·51 | ·62 | — | ·61 | ·54 | ·55 | ·62 | | | | | | |
| | Shaft accidents | ·07 | ·03 | ·01 | ·09 | — | ·03 | ·05 | ·04 | ·05 | | | | | | |
| | Miscellaneous | ·39 | ·28 | ·34 | ·36 | — | ·46 | ·31 | ·36 | ·36 | | | | | | |
| | From all causes underground | 1·17 | ·79 | ·86 | 1·07 | — | 1·13 | ·91 | ·97 | 1·06 | | | | | | |
| | From all causes above ground | ·85 | ·45 | ·41 | ·39 | — | ·68 | ·53 | ·54 | ·47 | | | | | | |
| Under and above ground .. | | | | | | | | 1·10 | ·72 | ·76 | ·93 | — | 1·06 | ·82 | ·88 | ·94 |
| From all accidents per 1,000,000 tons of mineral raised. | | | | | | | | 4·81 | 3·86 | 3·54 | 5·81 | — | 6·19 | 4·40 | 4·60 | 4·67 |

TABLE NO. 16.—In and about Mines classed under the
METALLIFEROUS MINES REGULATION ACTS.

| | | | | | | | | | | |
|----------------------------------|-------------|------------|------------|-------------|----------|----------|----------|-------------|-------------|-------------|
| Per 1,000 persons employed. | | | | | | | | | | |
| Underground :— | | | | | | | | | | |
| By explosions of fire-damp .. | — | — | — | — | — | — | — | — | — | — |
| „ falls of ground | — | 1·03 | 2·07 | 1·69 | — | — | — | 1·61 | 1·22 | 1·46 |
| Shaft accidents | — | ·17 | — | — | — | — | — | ·32 | ·16 | 2·68 |
| Miscellaneous | — | — | — | 1·13 | — | — | — | 1·93 | ·57 | ·73 |
| From all causes underground | — | 1·20 | 2·07 | 2·82 | — | — | — | 3·85 | 1·95 | 4·87 |
| From all causes above ground | 2·13 | ·43 | — | — | — | — | — | — | ·22 | ·54 |
| Under and above ground .. | 1·02 | ·98 | ·92 | 1·30 | — | — | — | 1·94 | 1·22 | 3·00 |

TABLE NO. 17.—In and about QUARRIES.

| | | | | | | | | | | |
|---------------------------------|-------------|------------|-------------|------------|------------|-------------|------------|------------|------------|------------|
| Per 1,000 persons employed. | | | | | | | | | | |
| Inside the quarries :— | | | | | | | | | | |
| By falls of ground | ·55 | ·40 | ·84 | ·46 | ·59 | ·44 | ·32 | ·46 | ·38 | ·38 |
| „ blasting | ·82 | ·60 | — | ·15 | — | ·44 | — | ·18 | ·11 | ·11 |
| During descent and ascent .. | — | — | — | — | — | — | — | — | — | — |
| Miscellaneous | ·55 | ·20 | ·33 | ·77 | — | 1·32 | ·22 | ·39 | ·43 | ·43 |
| From all causes inside .. | 1·91 | 1·20 | 1·17 | 1·39 | ·59 | 2·20 | ·54 | 1·03 | ·92 | ·92 |
| From all causes outside .. | ·56 | — | ·93 | — | — | 2·27 | ·21 | ·37 | ·59 | ·59 |
| Inside and outside | 1·46 | ·93 | 1·07 | ·75 | ·43 | 2·22 | ·43 | ·80 | ·81 | ·81 |

COMPARATIVE TABLES.

PERSONS EMPLOYED.

TABLE NO. 18.—Persons employed in and about the MINES classed under the COAL AND METALLIFEROUS MINES ACTS, from 1873 to 1920.

| Decennial Period or Year. | | Coal Mines Act. | | | | Metalliferous Mines Act. | | | | Total under both Acts. |
|---------------------------------|--------------|------------------|---------------|-----------|---------|--------------------------|---------------|--------|-----------|---------------------------------|
| | | Under ground. | Above ground. | | Total. | Under ground. | Above ground. | | Total. | |
| | | | Males. | Males. | | | Fe- males. | Males. | | |
| Averages | 1873-1882 .. | 403,281 | 94,687 | 5,460 | 503,428 | 33,256 | 18,952 | 3,180 | 55,388 | 558,816 |
| | 1883-1892 .. | 461,024 | 106,268 | 4,427 | 571,719 | 25,408 | 15,548 | 1,525 | 42,481 | 614,200 |
| | 1893-1902 .. | 588,446 | 139,166 | 4,779 | 732,391 | 19,778 | 13,267 | 624 | 33,669 | 766,060 |
| | 1903-1912 .. | 772,234 | 179,724 | 5,890 | 957,848 | 17,400 | 11,831 | 212 | 29,443 | 987,291 |
| 1913 | 909,834 | 211,483 | 6,573 | 1,127,890 | 16,525 | 10,712 | 175 | 27,412 | 1,155,302 | |
| 1914 | 915,381 | 211,789 | 6,576 | 1,133,746 | 14,426 | 9,135 | 148 | 23,709 | 1,157,455 | |
| 1915 | 754,673 | 191,448 | 7,521 | 953,642 | 11,869 | 7,822 | 140 | 19,831 | 973,473 | |
| 1916 | 792,911 | 195,430 | 9,722 | 998,063 | 11,858 | 7,372 | 225 | 19,455 | 1,017,518 | |
| 1917 | 811,510 | 198,783 | 11,047 | 1,021,340 | 12,476 | 7,774 | 250 | 20,500 | 1,041,840 | |
| 1918 | 794,843 | 202,625 | 11,399 | 1,008,867 | 12,243 | 8,216 | 362 | 20,821 | 1,029,688 | |
| 1919 | 945,806 | 236,131 | 9,376 | 1,191,313 | 12,327 | 9,063 | 271 | 21,661 | 1,212,974 | |
| 1920 | 990,359 | 249,547 | 8,318 | 1,248,224 | 12,291 | 8,818 | 214 | 21,323 | 1,269,547 | |

OUTPUT OF MINERALS.

TABLE NO. 19.—Output of Minerals from MINES under the COAL and METALLIFEROUS MINES ACTS, from 1873 to 1920.

| | Decennial Period or Year. | Coal. | Fireclay. | Ironstone.* | Oil Shale. | Other Minerals. | Total under the Coal Mines Act. | Total under the Metalliferous Mines Act. |
|----------|---------------------------|-------------|-----------|-------------|------------|-----------------|---------------------------------|--|
| | | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| Averages | 1873-1882 | 138,086,800 | 1,875,287 | 11,514,447 | 712,928 | 40,209† | 152,221,629 | 4,278,577 |
| | 1883-1892. | 169,921,705 | 2,079,818 | 8,634,571 | 1,835,174 | 175,239 | 182,646,507 | 4,110,068 |
| | 1893-1902 | 203,314,691 | 2,628,168 | 7,366,505 | 2,192,597 | 288,874 | 215,790,835 | 3,637,745 |
| | 1903-1912 | 253,967,596 | 2,758,318 | 7,787,910 | 2,735,153 | 481,157 | 267,730,134 | 3,275,844 |
| | 1913 | 287,411,869 | 2,585,763 | 7,709,624 | 3,280,143 | 623,954 | 301,611,353 | 3,236,490 |
| | 1914 | 265,643,030 | 2,374,068 | 7,241,481 | 3,268,666 | 558,228 | 279,085,473 | 2,973,526 |
| | 1915 | 253,179,446 | 1,839,746 | 6,080,218 | 2,998,652 | 399,201 | 264,497,263 | 2,815,816½ |
| | 1916 | 256,348,351 | 1,712,281 | 5,648,602 | 2,994,386 | 359,330 | 267,062,950 | 2,658,779 |
| | 1917 | 248,473,119 | 1,888,592 | 6,280,194 | 3,113,003 | 365,151 | 260,120,059 | 2,533,177½ |
| | 1918 | 227,714,579 | 1,891,394 | 5,921,162 | 3,076,850 | 313,518 | 238,917,503 | 2,442,209½ |
| | 1919 | 229,743,128 | 1,849,690 | 4,949,944 | 2,759,165 | 299,012 | 239,600,939 | 2,104,252 |
| | 1920 | 229,503,435 | 1,966,040 | 4,985,410 | 2,829,515 | 352,279 | 239,636,679 | 2,334,398 |

* For the total quantity of ironstone and iron ore raised see "Iron Ore" page 9.

† Average for eight years only.

OUTPUT OF MINERALS.

TABLE No. 20.—Output of the principal MINERALS from all MINES, from QUARRIES,* and from certain other WORKINGS, from 1873 to 1920.

| Decennial Period or Year. | Alum Shale. | Ar-senic. Pyrites. | Ar-senic. Pyrites. | Barium (Con-pounds). | Bauxite. | * Chalk. | * Chert, Flint, etc. | * Clays and Shale. | Coal. | Copper Ore. | Copper Precipitate. | Fluor Spar. | Gold Ore (Auriferous Quartz). | * Gravel and Sand. | Gypsum. | * Igneous Rocks. |
|---------------------------|-------------|--------------------|--------------------|----------------------|----------|----------|----------------------|--------------------|-------------|-------------|---------------------|-------------|-------------------------------|--------------------|---------|------------------|
| Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| 1873-1882.. | 5,568 | 40,680 | 73,357 | — | 3,362† | 76 | 5,904 | 2,807,285 | 138,086,800 | 64,738† | 308 | 245 | 3,570 | — | 72,213 | — |
| 1883-1892.. | 3,914 | 24,408 | 49,651 | — | 7,162 | 87 | 12,324 | 1,341,754 | 163,921,705 | 20,267† | 367† | 1,386 | 10,252 | — | 128,316 | — |
| 1893-1902.. | 3,912 | 24,408 | 49,651 | — | 11,038† | 86 | 13,383 | 1,189,597 | 159,089 | 4,971,975† | 457,107 | 587,925 | 14,156 | — | 185,159 | — |
| 1903-1912.. | 7,923 | 37,225† | 73,121 | — | 15,209 | 153 | 15,209 | 2,192,597 | 2,382,846 | 4,852,542 | 458,691 | 14,067 | 18,425 | — | 252,378 | 4,497,702\$ |
| 1913.. | 8,741 | 40,680 | 73,357 | — | 15,135 | 86 | 15,135 | 2,192,597 | 2,382,846 | 4,852,542 | 458,691 | 14,067 | 18,425 | — | 252,378 | 6,138,013 |
| 1914.. | 8,741 | 40,680 | 73,357 | — | 15,135 | 86 | 15,135 | 2,192,597 | 2,382,846 | 4,852,542 | 458,691 | 14,067 | 18,425 | — | 252,378 | 7,093,493 |
| 1915.. | 8,741 | 40,680 | 73,357 | — | 15,135 | 86 | 15,135 | 2,192,597 | 2,382,846 | 4,852,542 | 458,691 | 14,067 | 18,425 | — | 252,378 | 7,093,493 |
| 1916.. | 8,741 | 40,680 | 73,357 | — | 15,135 | 86 | 15,135 | 2,192,597 | 2,382,846 | 4,852,542 | 458,691 | 14,067 | 18,425 | — | 252,378 | 7,093,493 |
| 1917.. | 8,741 | 40,680 | 73,357 | — | 15,135 | 86 | 15,135 | 2,192,597 | 2,382,846 | 4,852,542 | 458,691 | 14,067 | 18,425 | — | 252,378 | 7,093,493 |
| 1918.. | 8,741 | 40,680 | 73,357 | — | 15,135 | 86 | 15,135 | 2,192,597 | 2,382,846 | 4,852,542 | 458,691 | 14,067 | 18,425 | — | 252,378 | 7,093,493 |
| 1919.. | 8,741 | 40,680 | 73,357 | — | 15,135 | 86 | 15,135 | 2,192,597 | 2,382,846 | 4,852,542 | 458,691 | 14,067 | 18,425 | — | 252,378 | 7,093,493 |
| 1920.. | 8,741 | 40,680 | 73,357 | — | 15,135 | 86 | 15,135 | 2,192,597 | 2,382,846 | 4,852,542 | 458,691 | 14,067 | 18,425 | — | 252,378 | 7,093,493 |

* Complete returns from all quarries under the Quarries Act, 1894, are only available for 1895 and subsequent years. Only the columns marked * are appreciably affected by this cause.

† Revised figures.

‡ Some gold was returned in these years, but the quantity of ore is either not given or only partially so.

§ Average for 8 years only.

DEATHS FROM ACCIDENTS.

TABLE No. 21.—**Number of Deaths** from different causes of ACCIDENTS in and about MINES classed under the COAL MINES ACTS, from 1873 to 1920.

| Decennial period or year. | | Number of deaths from accidents. | | | | | | Gross Total. |
|---------------------------------|--------------|--|------------------------|---------------------|---------------------|--------|-------------------------|-----------------|
| | | From different causes under ground. | | | | | Total on surface. | |
| | | Explosions of fire- damp or coal dust. | Falls of ground. | Shaft accidents. | Miscel- laneous. | Total. | | |
| Averages { | 1873-1882 .. | 263 | 453 | 130 | 191 | 1,037 | 92 | 1,129 |
| | 1883-1892 .. | 147 | 460 | 88 | 231 | 926 | 106 | 1,032 |
| | 1893-1902 .. | 104 | 448 | 79 | 264 | 895 | 120 | 1,015 |
| | 1903-1912 .. | 133 | 573 | 81 | 343 | 1,130 | 145 | 1,275 |
| | 1913 | 462 | 620 | 98 | 400 | 1,580 | 173 | 1,753 |
| 1914 | 26 | 596 | 66 | 398 | 1,086 | 133 | 1,219 | |
| 1915 | 41 | 673 | 61 | 392 | 1,167 | 130 | 1,297 | |
| 1916 | 22 | 706 | 44 | 391 | 1,163 | 150 | 1,313 | |
| 1917 | 20 | 724 | 62 | 408 | 1,214 | 156 | 1,370 | |
| 1918 | 160 | 685 | 47 | 385 | 1,277 | 124 | 1,401 | |
| 1919 | 27 | 589 | 45 | 342 | 1,003 | 115 | 1,118 | |
| 1920 | 26 | 544 | 40 | 355 | 965 | 138 | 1,103 | |

TABLE No. 22.—**Number of Deaths** from different causes of ACCIDENTS in and about MINES under the METALLIFEROUS MINES REGULATION ACTS, from 1873 to 1920.

| Decennial period or year. | | Number of deaths from accidents. | | | | | | |
|---------------------------------|--------------|--------------------------------------|------------------------|---------------------|---------------------|--------|-------------------------|-----------------|
| | | From different causes under ground. | | | | | Total on surface. | Gross Total. |
| | | Explo- sions of fire- damp. | Falls of ground. | Shaft accidents. | Miscel- laneous. | Total. | | |
| Averages { | 1873-1882 .. | — | 31 | 24 | 23 | 78 | 13 | 91 |
| | 1883-1892 .. | * | 24 | 13 | 17 | 54 | 7 | 61 |
| | 1893-1902 .. | — | 16 | 9 | 14 | 39 | 5 | 44 |
| | 1903-1912 .. | — | 16 | 7 | 9 | 32 | 6 | 38 |
| | 1913 | — | 12 | 6 | 10 | 28 | 4 | 32 |
| 1914 | — | 8 | 3 | 7 | 18 | 6 | 24 | |
| 1915 | — | 8 | 2 | 7 | 17 | 4 | 21 | |
| 1916 | — | 13 | 1 | 5 | 19 | 4 | 23 | |
| 1917 | — | 9 | 4 | 9 | 22 | 3 | 25 | |
| 1918 | — | 9 | 2 | 6 | 17 | 2 | 19 | |
| 1919 | — | 18 | 33 | 9 | 60 | 5 | 65 | |
| 1920 | — | 15 | 2 | 8 | 25 | 2 | 27 | |

* There were five persons killed in 1887 and one in 1888 by explosions of fire-damp.

ACCIDENT DEATH-RATES.TABLE NO. 23.—**Ratio of Mortality** from different causes of ACCIDENTS in and about MINES classed under the COAL MINES ACTS, per 1,000 PERSONS EMPLOYED, and per 1,000,000 tons of MINERAL RAISED, from 1873 to 1920.

| Decennial period or year. | | Death-rate from accidents per 1,000 persons. | | | | | | Death-rate from accidents under and above ground per 1,000,000 tons of mineral raised. | |
|---------------------------|------------|--|---------------------------|--------------------------|---------------------|--|---|--|---|
| | | Employed underground. | | | | | Em- ployed above ground, from all causes above ground. | | Em- ployed under and above ground. |
| | | By explo- sions of fire-damp or coal dust. | By falls of ground. | Shaft acci- dents. | Miscel- laneous. | From all causes under ground. | | | |
| Averages { | 1873-1882 | ·65 | 1·12 | ·32 | ·47 | 2·57 | ·92 | 2·24 | 7·42 |
| | 1883-1892 | ·32 | 1·00 | ·19 | ·50 | 2·01 | ·96 | 1·81 | 5·65 |
| | 1893-1902 | ·18 | ·76 | ·13 | ·45 | 1·52 | ·83 | 1·39 | 4·70 |
| | 1903-1912 | ·17 | ·74 | ·11 | ·44 | 1·46 | ·78 | 1·33 | 4·76 |
| | 1913 | ·51 | ·68 | ·11 | ·44 | 1·74 | ·79 | 1·55 | 5·81 |
| | 1914 | ·03 | ·65 | ·07 | ·43 | 1·19 | ·61 | 1·08 | 4·37 |
| | 1915 | ·05 | ·89 | ·08 | ·52 | 1·55 | ·65 | 1·36 | 4·90 |
| | 1916 | ·03 | ·89 | ·06 | ·49 | 1·47 | ·73 | 1·32 | 4·92 |
| | 1917 | ·02 | ·89 | ·08 | ·50 | 1·50 | ·74 | 1·34 | 5·27 |
| | 1918 | ·20 | ·86 | ·06 | ·48 | 1·61 | ·58 | 1·39 | 5·86 |
| | 1919 | ·03 | ·62 | ·05 | ·36 | 1·06 | ·47 | ·94 | 4·67 |
| 1920 | ·03 | ·55 | ·04 | ·36 | ·97 | ·54 | ·88 | 4·60 | |

TABLE NO. 24.—**Ratio of Mortality** from different causes of ACCIDENTS in and about MINES classed under the METALLIFEROUS MINES REGULATION ACTS, per 1,000 PERSONS EMPLOYED, from 1873 to 1920.

| Decennial period or year. | | Death-rate from accidents per 1,000 persons. | | | | | Em- ployed under and above ground. | |
|------------------------------|--------------|--|---------------------------|--------------------------|---------------------|--|--|--|
| | | Employed under ground. | | | | | | Employed above ground, from all causes above ground. |
| | | By ex- plosions of fire-damp. | By falls of ground. | Shaft acci- dents. | Miscel- laneous. | From all causes under ground. | | |
| Averages { | 1873-1882 .. | — | ·94 | ·72 | ·68 | 2·35 | ·58 | 1·62 |
| | 1883-1892 .. | ·02 | ·94 | ·52 | ·67 | 2·15 | ·39 | 1·44 |
| | 1893-1902 .. | — | ·83 | ·44 | ·69 | 1·96 | ·38 | 1·31 |
| | 1903-1912 .. | — | ·93 | ·41 | ·53 | 1·87 | ·47 | 1·30 |
| | 1913 | — | ·73 | ·36 | ·61 | 1·69 | ·37 | 1·16 |
| | 1914 | — | ·55 | ·21 | ·49 | 1·25 | ·65 | 1·01 |
| | 1915 | — | ·67 | ·17 | ·59 | 1·43 | ·50 | 1·06 |
| | 1916 | — | 1·10 | ·08 | ·42 | 1·60 | ·53 | 1·18 |
| | 1917 | — | ·72 | ·32 | ·72 | 1·76 | ·37 | 1·22 |
| | 1918 | — | ·74 | ·16 | ·49 | 1·39 | ·23 | ·91 |
| | 1919 | — | 1·46 | 2·68 | ·73 | 4·87 | ·54 | 3·00 |
| 1920 | — | 1·22 | ·16 | ·57 | 1·95 | ·22 | 1·22 | |

TABLE NO. 25.—**Number of Persons Employed and Output of Minerals** at QUARRIES under the QUARRIES ACT, 1894, from 1895 to 1920.

| Decennial period or year. | Persons employed. | | | Output. |
|---------------------------|-------------------|----------|---------|------------|
| | Inside. | Outside. | Total. | |
| Aver-ages { 1895-1904 .. | 60,399 | 45,023 | 105,422 | 40,483,641 |
| { 1905-1914 .. | 54,063 | 31,134 | 85,197 | 45,656,426 |
| 1915 | 40,029 | 22,098 | 62,127 | 37,711,612 |
| 1916 | 30,767 | 17,429 | 48,196 | 32,054,093 |
| 1917 | 28,447 | 15,184 | 43,631 | 30,165,836 |
| 1918 | 27,917 | 15,298 | 43,215 | 30,036,599 |
| 1919 | 36,879 | 20,197 | 57,076 | 31,136,124 |
| 1920 | 43,544 | 24,206 | 67,750 | 39,821,882 |

TABLE NO. 26.—**Number of Deaths** from different causes of ACCIDENTS at QUARRIES under the QUARRIES ACT, 1894, from 1895 to 1920.

| Decennial period or year. | Inside the quarries. | | | | | Outside the quarries. | Gross total. |
|---------------------------|----------------------|--------------|---------------------------|----------------|---------------|-----------------------|--------------|
| | Falls of ground. | By blasting. | During descent or ascent. | Miscellaneous. | Total inside. | | |
| Aver-ages { 1895-1904 .. | 44 | 11 | 3 | 37 | 95 | 20 | 115 |
| { 1905-1914 .. | 36 | 10 | 1 | 28 | 75 | 15 | 90 |
| 1915 | 23 | 16 | 1 | 22 | 62 | 12 | 74 |
| 1916 | 22 | 7 | — | 19 | 48 | 10 | 58 |
| 1917 | 13 | 11 | 2 | 19 | 45 | 11 | 56 |
| 1918 | 23 | 9 | — | 25 | 57 | 10 | 67 |
| 1919 | 14 | 4 | — | 16 | 34 | 12 | 46 |
| 1920 | 20 | 8 | — | 17 | 45 | 9 | 54 |

TABLE NO. 27.—**Death-rates** from different causes of ACCIDENTS per 1,000 PERSONS EMPLOYED at QUARRIES under the QUARRIES ACT, 1894, from 1895 to 1920.

| Decennial period or year. | Employed inside the quarries. | | | | | Em- ployed outside the quarries. | Gross total. |
|---------------------------|-------------------------------|--------------|---------------------------|----------------|---------------|--|--------------|
| | Falls of ground. | By blasting. | During descent or ascent. | Miscellaneous. | Total inside. | | |
| Aver-ages { 1895-1904 .. | ·73 | ·19 | ·04 | ·61 | 1·57 | ·45 | 1·09 |
| { 1905-1914 .. | ·66 | ·19 | ·01 | ·53 | 1·39 | ·47 | 1·06 |
| 1915 | ·57 | ·40 | ·02 | ·55 | 1·55 | ·54 | 1·19 |
| 1916 | ·72 | ·23 | — | ·62 | 1·56 | ·57 | 1·20 |
| 1917 | ·46 | ·39 | ·07 | ·67 | 1·58 | ·72 | 1·28 |
| 1918 | ·82 | ·32 | — | ·90 | 2·04 | ·65 | 1·55 |
| 1919 | ·38 | ·11 | — | ·43 | ·92 | ·59 | ·81 |
| 1920 | ·46 | ·18 | — | ·39 | 1·03 | ·37 | ·80 |

TABLE OF INSPECTION DIVISIONS (Corrected to April, 1921).

Chief Inspector of Mines
Deputy Chief Inspector of Mines
Electrical Inspector of Mines
Secretary to the Board for Mining Examinations

.. .. T. H. MOTTRAM, C.B.E.,
 H. WALKER, C.B.E.,
 J. A. B. HORSLEY,
 W. W. WARE,

Mines Department,
 Victoria Street, London, S.W.1.

| No. of Division. | Names and Areas of Divisions. | Inspectors in charge, Telegraphic Address and Telephone Number. | Senior Inspectors. | Junior Inspectors. | Sub-Inspectors of Mines. | Sub-Inspectors of Quarries. | Inspectors of Horses in Mines. |
|------------------|---|--|---|--|--|---|--|
| 1. | Scotland Division , comprising the whole of Scotland. | John Masterton, M.B.E., 38, Cockburn Street, Edinburgh. [Mines Inspector, Edinburgh.] [Central 7058.] | H. M. Hudspeth, D.S.O., M.C., 9, North Bank Terrace, Wilton Street, Glasgow. E.H. Frazer, 9, Fountainhall Road, Edinburgh. | H. J. Humphrys, D.S.O., M.C., 4, Dalblair Road, Ayr. J. A. S. Ritson, D.S.O., M.C., 16, Learmonth Place, Edinburgh. P. McIlhenny, "Verdala," Douglas Street, Hamilton. T. Green, 1, Bellevue Crescent, Edinburgh. W. Loudon, 100, Dewar Street, Dunfermline. (1 vacancy.) | G. Rankin, 5, South Oxford Street, Edinburgh. A. McCall, 33, Watson Street, Motherwell. T. H. Hamilton, The Cottages, Greengairs, by Airdrie. (1 vacancy.) | L. R. Sowerby, 28, Bellwood Street, Langside, Glasgow. | A. McArthur, 8, Hyndland Avenue, Glasgow, W. |
| 2. | Northern Division , comprising Northumberland, Durham, Cumberland, Westmorland, the North Riding of Yorkshire, the detached part of North Lancashire, and the Isle of Man. | J. R. R. Wilson, 4, Park Terrace, Newcastle-on-Tyne. [Mines Inspector, Newcastle-on-Tyne.] [1862 Central.] | W. Leck, M.B.E., Cleator Moor, Cumberland. T. Ashley, 1, Field House Terrace, Durham. | Douglas Hay, M.C., 38, Old Elvet, Durham. H. T. Foster, 184, Osborne Road, Newcastle-on-Tyne. G. Cook, Oakbank, Whitehaven. Arthur Stoker, 13, Woodbine Avenue, Gosforth, Newcastle-on-Tyne. A. M. Bryan, 41, Manor House Road, Jesmond, Newcastle-on-Tyne. W. Wainwright, West View, Fieldhouse Lane, Durham City. | W. Brown, 82, Sidney Grove, Newcastle-on-Tyne. W. Goodin, 47, Montrose Street, Saltburn-by-the-Sea. J. S. Jobling, 6, Wood View, Shincliffe Village, Durham. Wm. Cummings, 2, Dene View, Burnopfield. | R. W. Ball, 28, Honister Avenue, High West, Jesmond, Newcastle-on-Tyne. | R. L. Layfield, 4, Leazes Place, Durham. E. A. Stubley, 171, Ellesmere Road, Newcastle-on-Tyne. |
| 3. | York and North Midland Division , comprising East and West Ridings of Yorkshire and the Counties of Lincoln, Nottingham, and Derby (north of the River Trent). | F. H. Wynne, 13, Town Moor Avenue, Doncaster. [Mines Inspector, Doncaster.] [Doncaster 542.] | W. J. Charlton, 25, Cardigan Road, Leeds. W. E. T. Hartley, Sherwood Grange, Winchester Street, Nottingham. | A. L. Flint, 181, Hyde Park Road, Leeds. J. Hall, 8, Edgedale Road, Sheffield. H. S. S. Scott, 13, Windsor Road, Doncaster. Robert Young, 32, Hawthorne Street, Barnsley. | T. Gawthrop, 41, Junction Road, Sheffield. D. Coatesworth, Burwyn Villa, Cross Flatts Grove, Beeston, Leeds. J. W. Head, Old Mill House, St. Peter's Street, Radford, Nottingham. | G. Holden, 1, St. George's Terrace, Brook Hill, Sheffield. | R. Baxter, 54 Wilson Road, Sheffield. |

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| 4. | Lancashire, North Wales and Ireland Division, comprising part of Lancashire (namely, so much of the County as is not included in No. 2 Division), part of Cheshire (namely, so much of the County as is not included in No. 6 Division), Anglesey, Carnarvon, Denbigh, Flint, Merioneth, Montgomery, and Ireland. | A. D. Nicholson, Astley, Manchester. [Inspecting. Astley, Lancs.] [Atherton 76.] | D. H. F. Mathews, Hoole, Chester. G. J. Williams, Coed Menai, Bangor. A. H. Steele, Avondale Hotel, Promenade, Southport. | A. H. Barnard, Conisborough, nr. Rotherham (temporary). (2 vacancies.) | (1 vacancy.) J. Duncan, 133, Willows Lane, Accrington. W. Roberts, 37, Birley Street, Newton-le-Willows. J. T. Shaw, Marsh Brook Farm, Westoughton, Bolton. | Rhys Williams, 30, Friars Avenue, Bangor. O. Jones, 91, Ashworth Street, Rochdale. | D. Morris, 42, Whitledge Green, Bryn, near Wigan. |
| 5. | South Wales Division, comprising Brecon, Cardigan, Carmarthen, Glamorgan, Pembroke, Radnor, and Monmouth. | J. Dyer Lewis, 21, Stanwell Road, Penarth. [Mines Inspector, Penarth.] [Penarth 188.] | T. Greenland Davies, 22, Oakfield Road, Newport, Mon. J. M. Carey, Rhubina, Whitechurch, Cardiff. E. S. Rees, 19, Kensington Crescent, Swansea. | P. T. Jenkins, "Bryn-coed," Woodville Road, Newport, Mon. T. L. McBride, 10, Woodville Road, Newport, Mon. W. J. Owen, "Ochiltree," Cowbridge Road, Bridgend. B. F. Kerridge, 13, Godfrey Road, Newport, Mon. (1 vacancy.) | T. Waldin, 33, Hillside, Mount Pleasant, Neath. H. G. Madley, "Rhwyglyn," Ogmore Vale, Glam. E. Griffiths, 51, Albert Street, Llanelly. J. R. Jenkins, "Nythfa," Newport Road, Bassaleg, Mon. | W. J. Stephens, 80, Brunswick Street, Canton, Cardiff. | T. L. Evans, 19, Cosmeston Street, Cathays, Cardiff. H. H. Phillips, 25, Brynmor Crescent, Swansea. |
| 6. | Midland and Southern Division, comprising Bedford, Berks, Buckingham, Cambridgeshire, part of Cheshire, Cornwall, Derby (<i>South of the River Trent</i>), Devon, Dorset, Essex, Gloucester, Hants, Hereford, Hertford, Huntingdon, Kent, Leicester, Middlesex, Norfolk, Northampton, Oxford, Rutland, Salop, Somerset, Stafford, Suffolk, Surrey, Sussex, Warwick, Wilts, and Worcester. | H. A. Abbott, Wilmot House, Erdington, Birmingham. [Mines Inspector, Birmingham.] [114 Erdington.] | J. R. Felton, 298, Pershore Road, Birmingham. T. Boydell, "Guinan," Rowley Park, Stafford. | C. D. Mottram, 55, Francis Road, Edgbaston, Birmingham. P. S. Lea, 296, Pershore Road, Edgbaston, Birmingham. E. Kowley, 526, Kensington Hill, Brislington, Bristol. G. N. Scott, 22, Richmond Road, Handsworth, Birmingham. Richard King, Ranelagh Road, St. Austell. | T. H. Bull, "Verona," Keele Road, Newcastle, Staffs. H. Morgan, Newstead, Catholic Lane, Sedgley, near Dudley. S. Thomas, 93, Bracebridge Street, Nuneaton. | T. R. Rees, 185, Holly Road, Handsworth, Birmingham. | J. Evans, 226, Charles Road, Small Heath, Birmingham. |

* Including the Parishes of Church Lawton, Odd Rode, and Wildboardclough, and the portion of Cheshire situated on the east side of North Staffordshire Railway from Mow Cop Station to North Rode Station and south of the North Staffordshire Railway from North Rode Station to Rushton Station.

